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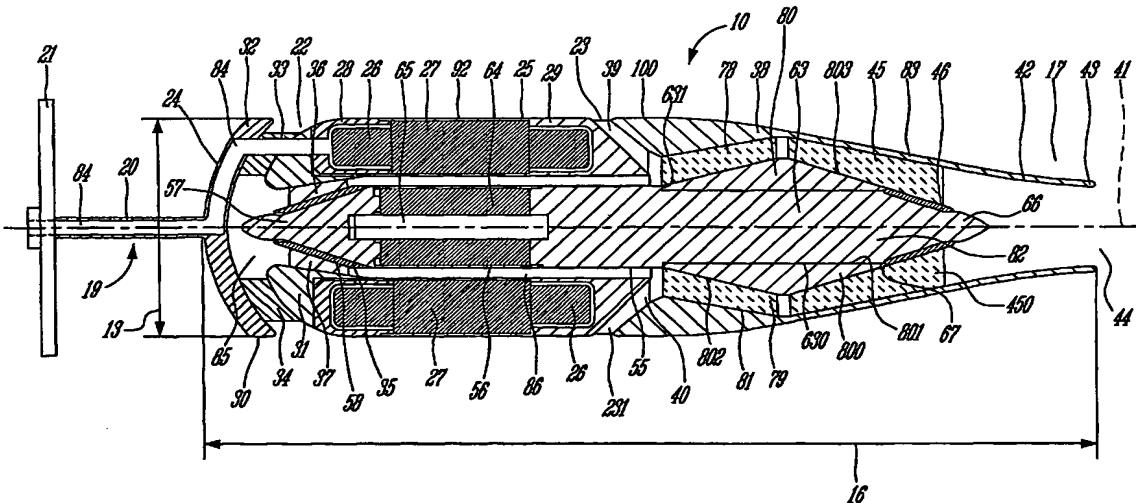
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[Continued on next page]

## (54) Title: BLOOD PUMP WITH FRUSTO-CONICAL BEARING STRUCTURE



(57) Abstract: The blood pump comprises a stationary housing structure and a rotative impeller mounted within the stationary housing structure and defining with the stationary housing structure passages through which blood pumped by the rotative impeller flows through the pump. An inflow bearing comprises an inflow frusto-conical face of the rotative impeller and an inflow frusto-conical bushing of the stationary housing structure having an inner face. Similarly, an outflow bearing comprises an outflow frusto-conical face of the rotative impeller and an outflow frusto-conical bushing of the stationary housing structure having an inner face. The inner face of both the inflow and outflow frusto-conical bushings (a) comprises at least three axial grooves evenly spread out around a longitudinal axis of the blood pump, and (b) successively defines a taper and a land in the direction of rotation of the rotative impeller between each pair of successive grooves. The taper has a diameter that gradually decreases in the direction of rotation of the rotative impeller, while the land has a generally constant diameter to form a seat for the frusto-conical face of the rotative impeller.

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SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,  
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